Request to Archive
With The National Centers for Environmental Information
For Extended Reconstructed Sea Surface Temperature (ERSST), Version 5
Provided by NCEI

2017-03-22

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

1. Who is the primary point of contact for this request?

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Physical Scientist

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2. Name the organization or group responsible for creating the dataset.

NCEI CCOG OSB

3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.

The monthly Extended Reconstructed Sea Surface Temperature (ERSST) dataset, available on 2°×2° grids has been revised herein to version 5 (v4) from v4 and v3b. Major revisions include: Major revisions for v5 include: 1) using unadjusted first-guess instead of adjusted first-guess in QC, 2) using latest International Comprehensive Ocean Atmosphere Data Set (ICOADS) Release 3.0 (R3.0) over 1854-2015 instead of R2.5 over 1854-2007, 3) using Argo temperature above 5 m depth that has not been used in previous version ERSST and other SST analysis, 4) using latest UK Met Office HadISST2 ice concentration over 1870-2015 instead of HadISST1 ice concentration over 1870-2010, 5) removing damping in high latitudes north of 60°N and south of 50°S in Empirical Orthogonal Teleconnection (EOT) Functions, 6) adding 10 more EOT modes in the Arctic, 7) reducing spatial filtering in training EOTs, and 8) revising ship SST bias correction relative to nighttime marine air temperature (NMAT) to the one relative to buoy SST observations. Other features remain same as in ERSSTv4.

ERSSTv5 is generated using in situ SST data and improved statistical methods that allow stable reconstruction using sparse data. The monthly analysis extends from January 1845 to the present. ERSST is suitable for long-term global and basin wide studies; local and short-term variations have been smoothed in ERSST. The dataset variable is sea surface temperature (SST) on a 2-degree global grid. The time resolution is monthly with time span from 1854 onward (updated monthly).

4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)

From 1845-01

Ongoing as continuous updates to the data record

5. Edition or version number(s) of the dataset:

ERSST v5xx

6. Approximate date when the dataset was or will be released to the public:

2017-06-01

7. Who are the expected users of the archived data? How will the archived data be used?

Climate research, monitoring and application community.

8. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?

Peer-reviewed publications:

Huang, B., Peter W. Thorne, Viva F. Banzon, Tim Boyer, Gennady Chepurin, Jay H. Lawrimore, Matthew J. Menne, Thomas M. Smith, Russell S. Vose, and Huai-Min Zhang, 2017: Extended Reconstructed Sea Surface Temperature version 5 (ERSSTv5), Upgrades, validations, and intercomparisons. J. Climate, in review.

9. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?

Input for NOAAGlobalTemp

10. List the input datasets and ancillary information used to produce the data.

Input Datasets: 1) International Comprehensive Ocean-Atmosphere Data Set (ICOADS) release 3.0; 2) NCEP GTS data set; 3) Argo SST (temperature above 5 m depth); 4) Hadley Centre HadISST2 Sea-Ice data set; 5) NCEP Sea-Ice data set.

11. List web pages and other links that provide information on the data.

https://www.ncdc.noaa.gov/data-access/marineocean-data/extended-reconstructed-sea-surface-temperature-ersst-v5

12. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.

1. Huang, B., Peter W. Thorne, Viva F. Banzon, Tim Boyer, Gennady Chepurin, Jay H. Lawrimore, Matthew J. Menne, Thomas M. Smith, Russell S. Vose, and Huai-Min Zhang, 2017: Extended Reconstructed Sea Surface Temperature version 5 (ERSSTv5), Upgrades, validations, and intercomparisons. J. Climate, in review.

13. Indicate the data file format(s).

1. netCDF-3

14. Are the data files compressed?

No

15. Provide details on how the files are named and how they are organized (e.g., file_name_pattern_YYYYMM.tar in monthly aggregations).

ersst_v5_analysis_sYYYYMM_eYYYYMM_cYYYYMMDDTHHMMSS.tar

with starting, ending, and creating time stamps.

16. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?

ERSST-Prod:/ersst/prod/ersst_v5/data

17. What is the total data volume to be submitted?

Historic Data: all historic data or data submitted as a completed collection.

Total Data Volume:	700MB
Number of Data Files:	4

Continuous Data: data volume rate for a continuous data production.

Total Data Volume Rate:	50MB per Month
Data File Frequency:	1 per Month
Data Production Start:	2017-06-01

18. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.

A future version is under development.

19. Describe the server that will connect to the ingest server at NCEI for submitting the data.

Physical Location:	NCEI, Asheville, NC
System Name:	ERSST-Prod
System Owner:	NCEI
Additional Information:	

20. What are the possible methods for submitting the data to NCEI? Select all that apply.

1. FTP PUSH

21. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.

1. Direct download links
2. Advanced web services (e.g., THREDDS Catalog Service)

22. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?

No known constraints apply to the data.

23. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.

As an important input for NOAAGlobalTemp, which is used for NOAA/NCEI climate monitoring products.

24. Are the data archived at another facility or are there plans to do so? Please explain.

No

25. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?

ERSSTv4 Submission Agreement

26. Do you have a data management plan for your data?

No

27. Have funds been allocated to archive the data at NCEI?

NCEI internal

28. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.

NCEI internal project

29. Is there a desired deadline for NCEI to archive and provide access to the data?

Archive by: 2017-07-01

Accessible by:

30. Add any other pertinent information for this request.

None